What is claimed is:

1. A tubing probe for measuring a volatile compound in a fluid contained in an enclosure, comprising:

a probe body made of a single piece of metal;

inlet and outlet channels provided in the probe body;

a gas permeable tube attached to one end of the probe body to form a continuous passage for a carrier gas between the inlet and outlet channels;

a sealing mechanism between the enclosure and the probe body for isolation of inside of the enclosure, and

the probe body for positioning substantially only the gas permeable tube inside the enclosure so that when the probe is inserted into the enclosure, the volatile compound pervaporates into the gas permeable tube.

2. The tubing probe according to claim 1, further comprising:

a supporting plate attached to the one end of the probe body for supporting the gas permeable tube.

3. The tubing probe according to claim 2, wherein the supporting plate includes a plurality of holes to which the gas permeable tube is threaded.

4. The tubing probe according to claim 1, further comprising:

tube adaptors attached at the one end of the probe body to which each end of the gas permeable tube is secured.

5. The tubing probe according to claim 4, further comprising:

the tube adaptors are larger in the outside diameter than the inside diameter of the gas permeable tube.

6. The tubing probe according to claim 1, wherein the sealing mechanism comprises a shoulder on the probe body, so that, when inserted, a standard fermenter nut port locks the probe in place and ensures that substantially only the gas permeable tube is located inside the enclosure.

7. The tubing probe according to claim 6, wherein the sealing mechanism further comprises an O-ring to ensure sterility of the enclosure.

8. The tubing probe according to claim 1, further comprising:

a carrier gas supply tube connected to the inlet channel, and a volatile detector connected to the outlet channel.

9. The tubing probe according to claim 8, further comprising:

the probe body having a head at another end, to which head a detachable detector head-set can be attached.

10. The tubing probe according to claim 1, wherein the gas permeable tube is made of a material which is permeable to a volatile of interest.

11. The tubing probe according to claim 10, wherein the gas permeable tube is adjusted in length and diameter to optimise the performance of the probe in relation to the volatile of interest and environment in which to operate.

12. The tubing probe according to claim 10, wherein the material of the gas permeable tube is silicone.

13. The tubing probe according to claim 4, wherein each tube adaptor is configured in two sections, the tube section to receive one end of the gas permeable tube and another section to be welded to one end of the probe body.

14. The tubing probe according to claim 3, wherein the supporting plate has a plurality of holes so that a gas permeable tube of various length and size can be threaded.

15. The tubing probe according to claim 1, wherein the probe body is designed to fit in a standard 25 mm port of the enclosure.

16. The tubing probe according to claim 1, wherein the enclosure is a bioreactor or a fermenter.